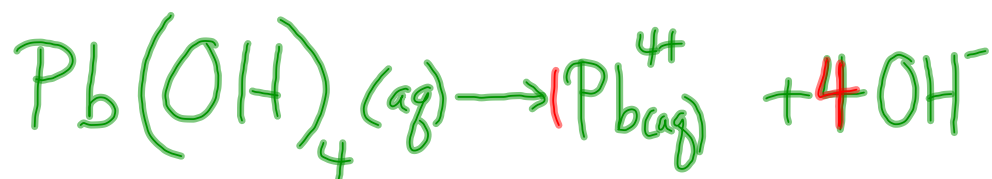
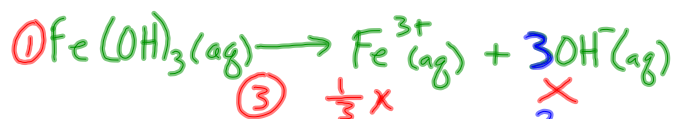


Example 2: Write the expression for K_{sp} for lead(IV) hydroxide.



$$K_{sp} = [Pb^{4+}]^1 [OH^{-}(aq)]^4$$

Example 3: If iron(III)hydroxide has a K_{sp} of 7.9×10^{-16} , find the concentration of $[OH^{-}]$?



$$K_{sp} = [Fe^{3+}(aq)] [OH^{-}(aq)]^3$$

$$7.9 \times 10^{-16} = \left(\frac{1}{3}x\right) (x)^3$$

$$7.9 \times 10^{-16} = \frac{1}{3} x^4 \quad \text{multiply both sides by 3}$$

$$3 \times 7.9 \times 10^{-16} = x^4$$

$$2.37 \times 10^{-15} = x^4$$

$$2.21 \times 10^{-4} \frac{mol}{L} = x$$

$$\sqrt[4]{2.37 \times 10^{-15}} = \sqrt[4]{y} \quad x^{-4}$$

$$16 = x^4$$

$$2 = x$$